

Please take out your Exam Review for Unit 1 (Finance)

1. For a certain kind of plaster work, 1.5 m^3 of sand are needed for every 100 m^2 of surface. How much sand will be needed for 450 m^2 of surface? _____

2. Digital Universe is a video game store that made a profit of \$1575 on the sale of 340 games. How much profit would the store expect to make on the sale of 150 games? _____

3. Jane plans to buy an ipod but has waited for it go on sale. The regular price of the iPod is \$169.99 but it has been discounted by 20%. How much will Jane pay for the iPod (tax included) if she buys it in Halifax, Nova Scotia? (HST 15%) _____

4. Claude works on the assembly line at a furniture manufacturing plant. He receives a wage of \$18.40/hour for hours worked Monday to Friday. On the weekend he earns time and a half. Claude works Tuesday to Sunday, for 7 hours a day. Calculate his earnings for the week. _____

5. The wholesale price of a snowblower is \$788.95. The markup is 65%. What is the retail price? _____

6. Lucy wants to make a \$6 profit on every decorated Christmas wreath she makes. If it costs her \$10 to make a wreath, then by what percentage will she mark up the price? _____

7. The retail price of a generator is \$617.40. The wholesale price was \$420. What is the percent markup? _____

8. Calculate the sale price of a Blue Ray player that regularly sells for \$129.00 and is on sale for 40% off.

9. The regular price of a bedroom set is \$358.99, but it is on sale for 35% off. What will the customer pay (tax included) if the bedroom set is sold in PEI? (5% GST and 10% PST)

10. The cost of a pack of 12 hamburger patties is \$6.90, the cost of a pack of 6 buns is \$1.59, and the cost for a pack of 24 slices of cheese is \$4.24. What is the cost to make 3 cheeseburgers? (A cheeseburger contains one patty, one piece of cheese and one bun) _____

11. Jared has a biweekly gross pay of \$1980. His deductions are: union dues \$15.38, pension \$60, CPP \$91.34, EI \$34.25, Federal Tax \$216.80 and Provincial Tax \$142.90. What is his taxable income? _____

① Gross Pay
② - No deductions
Taxable income
- after deductions
(company)

③ Net income
- after taxes

$$\begin{array}{r} 1980 \\ - 15.38 \\ - 60 \\ \hline \$ 1904.62 \end{array}$$

12. Rachael works for an electronics store and earns a commission on all her sales. If she makes sales totaling \$1450.00 in one week and receives \$174 in commission, what is her rate of commission?

$$\frac{174}{1450} \times 100 = 12\%$$

13. You plan a trip to Egypt. You go to the bank with \$300 Canadian dollars and exchange it for Egyptian pounds. Later in that day, you receive word that the trip is cancelled. You return to the bank and exchange the pounds that you purchased back into Canadian dollars. How much money did you lose due to this transaction?

Bank Buying Rate	Country	Currency Units	Bank Selling Rate
0.159300 CAD	Egypt	Pounds	0.217300 CAD

~~$$300 \times \frac{1 \text{ pound}}{0.217300 \text{ CAD}} = 1380.58 \text{ pounds}$$~~

$$x = 1380.58 \text{ pounds}$$

~~$$1380.58 \text{ pounds} \times \frac{0.159300 \text{ CAD}}{1 \text{ pound}} = 219.93 \text{ CAD}$$~~

$$x = 219.93 \text{ CAD}$$

$$300 - 219.93 = \$80.07 \text{ LOST}$$

14. Georgina's time card for her job is shown below. She earns \$11.20/hour and a shift premium of \$3.00/hour for hours between 6 pm and 8 am. What is her **gross pay** for the week?

Day	In	Out	Regular hours	Premium hours
Monday	7:45 am	6:00 pm		
Tuesday	4:15 pm	9:00 pm		
Wednesday	9:30 am	4:00 pm		
Thursday	5:30 am	1:00 pm		
Friday	9:00 am	5:30 pm		

Total hours

10.25
4.75
6.5
7.5
8.5

37.5 hrs

$$37.5 \times 11.20 = \$420$$

$$8.25 \times 3.00 = \$24.75$$

$$\underline{444.75}$$

14. Georgina's time card for her job is shown below. She earns \$11.20/hour and a shift premium of \$3.00/hour for hours between 5 pm and 8 am. What is her **gross pay** for the week?

Day	In	Out	Regular hours	Premium hours
Monday	7:45 am	6:00 pm		
Tuesday	4:15 pm	9:00 pm		
Wednesday	9:30 am	4:00 pm		
Thursday	5:30 am	1:00 pm		
Friday	9:00 am	5:30 pm		

Total hours

10.25
4.75
6.5
7.5
8.5

37.5

$$37.5 \times 11.20 = 420$$

+

$$\begin{aligned} \text{Total} &= 8.25 \times 3 \\ &= 24.75 \end{aligned}$$

$$\underline{= \$444.75}$$

15. As a teacher, Mr. Lando has a bi-weekly gross income of \$2354.75. His before-tax deductions include a short-term disability premium of 0.6%, union dues of 2.7%, and a pension amount of 4%. If he pays federal tax at a rate of 18.5%, provincial tax at a rate of 6.2%, CPP at 4.95% (above \$3500 per year), and EI at 1.73%, **what is his net income?** _____

$$\text{Gross} = \$2354.75$$

$$\text{S-T dis (0.6\%)} = 2354.75 \times 0.006 = \$14.13$$

$$\text{Union dues (2.7\%)} = 2354.75 \times 0.027 = \$63.58$$

$$\text{Pension (4\%)} = 2354.75 \times 0.04 = \$94.19$$

$$\begin{array}{r} \rightarrow 2354.75 - 171.90 \\ = \$2182.85 \text{ (taxable income)} \end{array} \quad \begin{array}{r} \$171.90 \end{array}$$

$$\text{Fed. tax (18.5\%)} = 2182.85 \times 0.185 = 403.83$$

$$\text{Prov. tax (6.2\%)} = 2182.85 \times 0.062 = 135.34$$

$$\text{EI (1.73\%)} = 2182.85 \times 0.0173 = 37.76$$

$$\text{CPP (4.95\%)} = 2182.85 \times 0.0495 =$$

16. Fred earned \$180 in interest on an investment that earned 3.1% for 5 years with simple interest. What was the principal that was invested? _____

$$\frac{I}{rt} = \frac{PrA}{rA}$$

$$P = \frac{I}{rt} = \frac{180}{0.031 \cdot 5} = \frac{180}{0.155} = \$1161.29$$

cash advance

\$150

17%

12 days

$$I = Prt$$

↙

$$= (150)(0.17)\left(\frac{12}{365}\right)$$

=

17. A deposit of \$1650 is invested at 3% per annum, compounded quarterly, for 5 years. How many interest periods will there be?

20

$$A = P\left(1 + \frac{r}{n}\right)^{n \cdot t}$$
$$= 1650\left(1 + \frac{0.03}{4}\right)^{4 \cdot 5}$$
$$= 1650(1.0075)^{20}$$
$$= 1650(1.16118)$$
$$= \$1917.12$$

19. A \$1350 investment was made at a rate of 2.5% per annum, compounded monthly, for 4 years.
- How many interest periods will there be? 48
 - How much will the investment be worth at the end of the 4 years? \$1491.83
 - How much interest was earned? 141.83
 - Would the same investment have earned the same amount of interest if it was compounded semi-annually for 4 years? Explain.

$$A = P \left(1 + \frac{r}{n}\right)^{nt}$$

$$= 1350 \left(1 + \frac{0.025}{12}\right)^{12 \cdot 4}$$

$$> 1350 (1.002083)^{48}$$

$$= 1350 (1.1056383)$$

$$= \$1491.80$$

$$\begin{array}{r} 1491.83 \\ - 1350 \\ \hline \$141.83 \end{array}$$

d) $A = P \left(1 + \frac{r}{n}\right)^{n \cdot t}$

$$= 1350 \left(1 + \frac{0.025}{2}\right)^{2 \cdot 4}$$

$$= 1350 (1.0125)^8$$

$$= 1350 (1.104486)$$

$$= 1491.06$$

$$1491.80 - 1491.06$$

$$= 0.74$$

20. Jeff invested \$4300 at 3.1% per annum, compounded quarterly for 6 years. Calculate the final investment value and the interest earned at the end of the 6 years.

$$A = P \left(1 + \frac{r}{n}\right)^{nt}$$

$$= 4300 \left(1 + \frac{0.031}{4}\right)^{4 \cdot 6}$$

$$= 4300 (1.00775)^{24}$$

$$= 4300 (1.203554)$$

$$= \$5175.30$$

$$\begin{array}{r} 5175.30 \\ - 4300 \\ \hline \$875.30 \end{array}$$